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Ian M. Williams

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EXAMINER

TRUVAN, LEYNNA THANH

ART UNIT

PAPER NUMBER

2435

NOTIFICATION DATE

DELIVERY MODE

12/11/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/690,860 | Applicant(s) WILLIAMS ET AL. | |
| | Examiner Leynna T. Truvan | Art Unit 2435 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) 26-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 34-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- 1.** Claims 1-25 and 34-36 are pending.

Claims 26-33 are cancelled.

Response to Arguments

- 2.** Applicant's arguments with respect to claims 1-25 and 34-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 3. Claims 1-11, 20-25 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schumann, et al. (US 7,218,754) in view of Fukushima (US 6,388,638).**

As per claim 1:

Schumann discloses a method for protecting digital content, comprising:
providing digital content organized as a sequence of frames to a rendering unit;
(col.5, lines 32-45 and col.16, lines 16-29)

altering image content within the rendering unit in response to tags in a data stream provided to the rendering unit to remove, add, or modify an item in the image content (col.16, lines 8-15) that is a portion of the digital content visible to a viewer **(col.6, lines 37-48 and col.15, lines 15-40)**, wherein *[the alterations of the image content are not visually perceptible for real-time display (Fukushima-col.1, lines 42-47)]* but are visually perceptible in a recorded version of the image content, **(col.5, lines 10-17 and col.16, lines 30-39)**

the step of altering image content further including detecting one of the tags in the data stream associated with a frame in the sequence of frames, the portion of the frame being modified from a preceding frame in the sequence to generate an altered frame; and **(col.7, lines 18-38 and col. 16, lines 30-41)**

utilizing the tag to access an action table to cause either the altered frame or the frame to be displayed. **(col.15, lines 20-23)**

Schumann discloses a first disruptive technique includes creating signals that are invisible to the human eye, but are visible to an IRD (col.5, lines 18-23 and col.16, lines 8-15). This suggests real-time display, but Schumann did not clearly explain the alterations of the digital content are not visually perceptible for real-time display.

Fukushima discloses displaying images that have been recorded and able to change its display contents (col.1, lines 5-8 and 30-35). Fukushima discusses the prior art cannot display image in real time due to heavy calculation load resulting in unnatural images which intermittently displayed frame by frame. This requires a special purpose

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processor and circuit, thus would be costly and the apparatus scale increases (col.1, lines 42-47).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine Ryan to teach alterations of digital content are visually perceptible in a recorded version with Fukushima to teach the alterations of the digital content are not visually perceptible for real-time display because due to heavy calculation load resulting in unnatural images which intermittently displayed frame by frame and requires a special purpose processor and circuit (col.1, lines 42-47).

As per claim 2: see Schumann on col.6, lines 28-30; discloses the method, according to claim 1, wherein the step of altering comprises randomly selecting frames for alteration.

As per claim 3: see Schumann on col.6, lines 28-36 and col.16, lines 30-39; discloses the method, according to claim 1, wherein altering comprises distorting at least one object visible to the viewer in a frame.

As per claim 4: see Schumann on col.5, lines 10-17 and col.16, lines 8-39; discloses the method, according to claim 1, wherein altering comprises relocating at least one object visible to the viewer in a frame.

As per claim 5: see Schumann on col.6, lines 37-48 and col.15, lines 15-40; discloses the method, according to claim 1, wherein altering comprises adding at least one object visible to the viewer to a frame.

As per claim 6: see Schumann on col.7, lines 5-10; discloses the method, according to claim 5, wherein the rendering unit is a graphics processing unit.

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As per claim 7:

Schumann discloses a device for protecting digital content, comprising:

a rendering unit (**col.5, lines 32-45 and col.16, lines 16-29**) configured to detect tags in a data stream and to associate the detected tags with commands for altering image content to the rendering unit to remove, add, or modify an item in the image content that is a portion of the digital content visible to a viewer (**col.6, lines 37-48 and col.15, lines 15-40**), wherein [the alterations of the image content are not visually perceptible for real-time display] but are visually perceptible in a recorded version content (**col.5, lines 10-17 and col.16, lines 30-39**), the rendering unit include a tag detector for detecting the tags in the data stream, one of the tags associated with one frame in a sequence of frames (**col.16, lines 8-15**), a portion of the frame being altered from a preceding frame in the sequence to generate an altered frame; and (**col.7, lines 18-38 and col. 16, lines 30-41**)

an action table utilized to cause either the altered frame or the one frame to be displayed. (**col.15, lines 20-23**)

Schumann discloses digital content visible to a viewer and visually perceptible in a recorded version where the user can interact via online gaming environment. This suggests real-time display, but Schumann did not clearly explain the alterations of the digital content are not visually perceptible for real-time display.

Fukushima discloses displaying images that have been recorded and able to change its display contents (col.1, lines 5-8 and 30-35). Fukushima discusses the prior art cannot display image in real time due to heavy calculation load resulting in unnatural

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images which intermittently displayed frame by frame. This requires a special purpose processor and circuit, thus would be costly and the apparatus scale increases (col.1, lines 42-47).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine Ryan to teach alterations of digital content are visually perceptible in a recorded version with Fukushima to teach the alterations of the digital content are not visually perceptible for real-time display because due to heavy calculation load resulting in unnatural images which intermittently displayed frame by frame and requires a special purpose processor and circuit (col.1, lines 42-47).

As per claim 8: see Schumann on col.15, lines 20-23; discloses the device, according to claim 7, wherein the rendering unit includes a table for storing symbols used when associating the detected tags with the commands.

As per claim 9: see Schumann on col.4, lines 28-47; discloses the device, according to claim 8, wherein the rendering unit comprises memory for storing overlays for alteration of the image content.

As per claim 10: see Schumann on col.6, lines 28-30; discloses the device, according to claim 8, wherein the rendering unit comprises a random number generator for randomly selecting when to apply the commands.

As per claim 11: see Schumann on col.6, lines 28-30; discloses the device, according to claim 10, wherein the random number generator randomly selects when to apply overlays.

As per claim 20: see Schumann on col.4, lines 1-; discloses the device, according to

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claim 10, wherein the device is a digital video camera.

As per claim 21: see Schumann on col.4, lines 1-; discloses the device, according to claim 10, wherein the device is a digital video disc recorder.

As per claim 22: see Schumann on col.7, lines 38-50; discloses the device, according to claim 10, wherein the device is a compact disc recorder.

As per claim 23: see Schumann on col.7, lines 38-50 and col.15, lines 58-60; discloses the recording device, according to claim 10, wherein the device is a hard disk drive recorder.

As per claim 24: see Schumann on col.7, lines 38-50; discloses the device, according to claim 10, wherein the device is a digital tape drive recorder.

As per claim 25: see Schumann on col.7, lines 38-50; discloses the device, according to claim 10, wherein the device is a floppy disk drive recorder.

As per claim 34: see Schumann on col.6, lines 37-48 and col.15, lines 15-40; discloses the rendering unit causes display of the altered frame upon detection of the tag unless a proper response is entered by the user.

As per claim 35: see Schumann on col.6, lines 28-30 and col.15, lines 15-40; discloses the step of applying the tag to a randomizer to randomly apply or ignore the tag or send the tag to the action table.

As per claim 36: see Schumann on col.6, lines 37-48 and col.15, lines 15-40; discloses the step of in response to the detection of the tag, invoking the graphical user interface (GUI) to allow a user to enter a key to prevent the action table from being accessed so that the unaltered frames are not displayed.

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4. Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schumann, et al. (US 7,329,188) and Fukushima (US 6,388,638) and in further view of Ryan, et al. (US 6,374,036)

As per claim 12:

Schumann and Fukushima combination discloses the device, according to claim 10, wherein the rendering unit. However, the rendering unit of the Schumann and Fukushima combination does not comprise a decryptor.

Ryan discloses digital video carries the field markers (tags) and watermarks (col.6, lines 22-30) and decodes the watermark (col.6, lines 48-50). Thus, it would have been obvious for a person of ordinary skills in the art to combine the inventions of Schumann and Fukushima combination with Ryan to teach a decryptor because to obtain the original digital video during playback as legitimate recording (Ryan -col.6, lines 48-50).

As per claim 13:

Schumann and Fukushima combination discloses the device, according to claim 10, wherein the rendering unit to alter image frames (Schumann - col.5, lines 33-65 and col.10, lines 5-11). However, the rendering unit of the Schumann and Fukushima combination does not suggest configured to detect watermarks and to alter image frames in response to detected watermarks.

Ryan discloses digital video carries the field markers (tags) and watermarks and verifies the watermark (col.6, lines 22-30). Thus, it would have been obvious for a person of ordinary skills in the art to combine the inventions of Schumann and

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Fukushima combination with Ryan to detected watermarks because this identifies when obtaining the original digital video during playback as legitimate recording (Ryan -col.6, lines 48-50).

As per claim 14:

Schumann and Fukushima combination discloses the device, according to claim 10, wherein the rendering unit provides a graphical user interface (Schumann - col.3, lines 56-58 and col.10, lines 1-10). However, the rendering unit of the Schumann and Fukushima combination does not suggest watermarks.

Ryan discloses digital video carries the field markers (tags) and watermarks and verifies the watermark (col.6, lines 22-30). Thus, it would have been obvious for a person of ordinary skills in the art to combine the inventions of Schumann and Fukushima combination with Ryan to detected watermarks because this identifies when obtaining the original digital video during playback as legitimate recording (Ryan -col.6, lines 48-50).

As per claim 15: as rejected on the basis of claim 14 above and further see Ryan on col.6, lines 25-50; discloses the device, according to claim 15, wherein the graphical user interface provides after detecting a threshold number of watermarks.

As per claim 16: as rejected on the basis of claim 14 above and further see Ryan on col.3, lines 23-30; discloses the device, according to claim 15, wherein the graphical user interface provides a data entry block for entry of a key.

As per claim 17: as rejected on the basis of claim 14 above and further see Ryan on col.6, lines 25-29; discloses the device, according to claim 16, wherein the

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rendering unit is configured to down sample in response to a failure to enter an acceptable key.

As per claim 18: as rejected on the basis of claim 14 above and further see Ryan on col.4, lines 62-64; discloses the device, according to claim 16, wherein the rendering unit is configured to disable recording in response to a failure to enter an acceptable key.

As per claim 19: as rejected on the basis of claim 14 above and further see Ryan on col.3, lines 15-18; discloses the device, according to claim 16, wherein the rendering unit is configured to randomly alter the selected frames in response to a failure to enter an acceptable key.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leynna T. Truvan whose telephone number is (571) 272-3851. The examiner can normally be reached on Monday - Thursday (7:00 - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. T. T./

Examiner, Art Unit 2435

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435